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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,041	03/17/2004	Vladimir V. Smirnov	967318.00002	3474

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EXAMINER	
WARTALOWICZ, PAUL A	

ART UNIT	PAPER NUMBER
1754	

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/802,041	SMIRNOV ET AL.	
	Examiner	Art Unit	
	Paul A. Wartalowicz	1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 March 2004* is/are: a)☒ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because there is a singular figure, the label "Figure 1" should be deleted. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. Claims 1-6, 12-18, 20-23, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (EP 0640574) in view of Shimizu et al. (EP 0435210) and Peterson (U.S. 4532028).

As to claims 1, 20-23, and 25-26, Ito et al. teach a method for treating chlorinated organic materials (page 2, lines 1-2) comprising: adding at least one catalyst material such as platinum or palladium (page 4, lines 1-18) to said filtered solvent containing said chlorinated material; hydrogenating said filtered solvent containing said chlorinated organic material (page 3, lines 41-43); wherein said step of hydrogenating said filtered solvent containing said chlorinated organic material includes the steps of pressurizing (less than or equal to 102 atmospheres, page 4, lines 55-56) with a hydrogen gas source (page 5, lines 55-57) and heating (100-350°C, page 4, lines 55-56) said filtered

solvent containing said chlorinated organic material. Ito et al. also teach a step of analyzing effluent from a reactor comprising a gas chromatograph (page 6, lines 44-47).

As to claim 1, Ito et al. fail to teach the limitation of adding a quantity of an aliphatic alcohol. Ito et al. also fail to teach the limitations of adding a chlorinated organic material to a solvent, filtering said solvent through a filtering material containing said chlorinated organic material, adding a quantity of sodium hydroxide to said filtered solvent. Ito et al. also fail to teach the limitation of filtering said solvent through a filtering material containing said chlorinated organic material.

As to claims 1, 12 and 13, Shimizu et al., however, teach the process of converting carbon tetrachloride to methyl chloride by the reaction with methyl alcohol (col. 4, lines 38-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have provided the step of introducing methyl alcohol (col. 4, lines 38-39) in the process of Ito et al. in order to convert carbon tetrachloride into a less harmful product (col. 1, lines 4-8) as taught by Shimizu et al.

As to claims 1-6 and 20-23, Peterson, however, teaches a method for the treatment of halogenated aromatics in hydrocarbon streams (col. 1, lines 8-12) wherein polychlorinated biphenyls (PCB's) are treated with the solvent benzyl alcohol (col. 8, line 5) and sodium hydroxide (col. 8, line 50) for the purpose of reducing the content of halogenated aromatic hydrocarbons in a hydrocarbon solution (col. 3, lines 6-10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have provided the step of treating a chlorinated

waste material with sodium hydroxide (col. 8, line 50) and benzyl alcohol (col. 8, line 5) in order to reduce the halogenated aromatics in the hydrocarbon stream (col. 1, lines 8-12) as taught by Peterson.

As to claim 1, Peterson also teaches that filtration can be employed in the process of reducing halogenated aromatics in hydrocarbon solutions (col. 7, lines 20-24).

Therefore, it would have been obvious to one of ordinary skill in the art to provide filtration in the process of Ito et al. in order to separate hydrocarbons from solvent in a well-known treatment of halogenated aromatics in hydrocarbon streams (col. 1, lines 8-12) as taught by Peterson.

As to the limitations in claims 14 and 15, Peterson teaches the addition of sodium hydroxide but fails to teach the ratio of sodium hydroxide to chlorinated organic material equal to 0.7-2:1 and the said quantity of sodium hyrdroxide is a 5-25% solution of sodium hydroxide respectively. It would be obvious to one of ordinary skill in the art to determine the amount and concentration of sodium hydroxide for the treatment of chlorinated material through routine experimentation. In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

As to the limitation in claim 17 Ito et al. teach a catalyst step in the process of treating chlorinated material but fail to teach a catalyst material added in a quantity of between approximately 0.01 and 0.02 grams of catalyst material per gram of chlorinated organic material, it is obvious to one of ordinary skill in the art to have approximately 0.01 and 0.02 grams of catalyst material per gram of chlorinated organic material to

effectively reduce chlorinated waste to a more useful product (page 2, lines 56-58) as taught by Ito et al.

As to the limitation in claim 18, Ito et al. teach the step of hydrogenation in the process of treating chlorinated waste materials but fail to teach that hydrogenating said filtered solvent containing said chlorinated organic material comprises hydrogenating in a vented vessel, the primary reference teaches a process for treating chlorinated material in a pressurized environment (less than or equal to 120 atmospheres, page 4, lines 55-56). It is inherent that a vessel capable of pressurizing a reaction is a vented vessel such that the vents aid in pressurizing said vessel.

2. Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (EP 0640574) in view of Peterson (U.S. 4532028) and Shimizu et al. (EP 0435210) and Taniguchi et al. (U.S. 5607490).

Ito et al. (EP 0640574) in view of Peterson (U.S. 4532028) teach a process for the treatment of chlorinated material as described above. Ito et al. (EP 0640574) fail to teach a filtering material unwoven that is capable of separating waste particles of no less than approximately 1 micron in size, wherein said filtering material is at least one material selected from the group consisting of a polymeric fabric, a thick felt, ceramics, metal-ceramics, porous metals further comprising filtering said solvent containing said chlorinated organic through a filter of unwoven polymer fabric, wherein said unwoven polymer fabric has a ratio of thickness to warp of approximately 1:100 and a ratio of

thickness to weft of 1:60 or a ratio of thickness to warp of at least 1:90 and a ratio of thickness to weft of at least 1:50.

Taniguchi et al., however, teach a non-woven felt filter (col. 2, lines 39-41) that can resist deterioration from chlorinated materials (resists deterioration from hydrogen chloride, col. 1, lines 64-67; col. 2, lines 1-12).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have provided the non-woven felt filter (col. 2, lines 39-41) in Peterson (U.S. 4532028) in order to use a filter that can resist deterioration from contact of chlorinated materials (resists deterioration from hydrogen chloride, col. 1, lines 64-67; col. 2, lines 1-12) as taught by Taniguchi et al.

As to the limitations in claims 10 and 11 of said unwoven polymer fabric has a ratio of thickness to warp of approximately 1:100 and a ratio of thickness to weft of 1:60 or wherein said unwoven polymer fabric has a ratio of thickness (measured in mm) to warp of at least 1:90 and a ratio of thickness to weft of at least 1:50, it would be obvious to one of ordinary skill in the art to optimize the dimensions of the chemical resistant filter taught by Taniguchi et al. in order to yield satisfactory results in the process of Ito et al. (EP 0640574) in view of Peterson (U.S. 4532028) and Shimizu et al. (EP 0435210) since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art in the absence of unexpected results (*In re Boesch,* 617 F.2d 272, 205 USPQ 215). In the present case, the yield of the product is the result effective variable and the ratios of thickness to warp and thickness to weft can be obtained through routine experimentation to optimize said yield of product.

3. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (EP 0640574) in view of Peterson (U.S. 4532028) and Shimizu et al. (EP 0435210) and Schmidt et al. (U.S. 4246104).

As to the limitation in claim 24, Ito et al. teach a high temperature and pressure environment but are silent as to the heating in an autoclave (page 4, lines 55-58). Schmidt et al., however, teach that it is well known to carry out pressurized treatments with an autoclave (col. 3, lines 47-50). Therefore, it would obvious to one of ordinary skill in the art at the time applicant's invention was made to have provided the heating in an autoclave in Ito et al. in order to use a well-known apparatus as taught by Schmidt et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul A. Wartalowicz whose telephone number is (571) 272-5957. The examiner can normally be reached on 8:30-6 M-Th and 8:30-5 on Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Paul Wartalowicz
October 12, 2005

COLLEEN P. COOKE
PRIMARY EXAMINER